WITTUR

DRIVE - INSTRUCTION MANUAL

SZS© CONTROLLER

Code	**PM.2.004929.EN**
Edition	**22 July 2020**
Version	**A**
SEM ID	**814-000-000**

safety in motion™

info@wittur.com
www.wittur.com

sematic®
a WITTUR brand

Confidentiality agreement Disclaimer

The software/hardware "Sematic SZS©" and all the relevant information, ideas, concepts and know-how are confidential and the exclusive property of Sematic.
All information relevant to this instruction manual and any other support supplied by Sematic must be kept confidential and proprietary to Sematic and shall not to be copied or reproduced in any form whatsoever.
Any information contained in the "Sematic SZS©" shall not be disclosed to anyone, without Sematic's written consent apart from authorized representatives employed by the user which commits itself to the confidentiality clause.
The Company that makes use of the Sematic SZS©, binds itself not to use confidential informations owned by Sematic and not to compile or re-engineer the Sematic SZS© and any information in it contained.

Sematic regards all the information contained in this instruction manual to be correct at the time of printing. This information does not constitute any obligation to Sematic and can be modified without prior notification. Sematic cannot be held responsible for any possible damages or claims caused to items or persons due to errors or misunderstandings within the contents of this instruction manual.

We care about your integrated solution!

COMPONENT SYSTEMS

- *Automatic lift doors*
- *Frame and frameless glass doors*
- *Enhanced car door operator solutions*
- *Complete cabins*
- *Car Frames*
- *Custom integrated packages*
- *Special lift doors, cabins and car frames*

ELEVATOR SYSTEMS & SUBSYSTEMS

- *Rope traction elevators*
- *Machineroomless roped elevators*
- *Modular hydraulic elevators*
- *Hydraulic elevators*
- *Panoramic elevators*
- *Hospital elevators*
- *Special executions*

1 PREFACE

This manual has been drafted taking into account that the Company installing genuine Sematic products will comply with the following necessary requirements:

- *personnel responsible for the installation and/or maintenance of the doors must be familiar with the General and Specific regulations in force on the subjects of work safety and hygiene (89/391/CEE - 89/654/CEE - 89/656/CEE);*
- *personnel responsible for the installation and/or maintenance must be familiar with the Sematic product and must have been trained by Sematic or by an authorized Sematic agent;*
- *installation equipment used must be in good working order with all measuring instruments calibrated (2009/104/EC).*

Sematic:

- *undertakes to update the present manual and send the customer copies of all new updates together with material;*
- *within its continuous product improvement policy, reserves the right to make changes to the designs and materials of its products. Sematic will give an agreed reasonable time to all its customers to allow them to adapt to the new changes their complementary current constructions;*
- *guarantees a good performance only of the original parts sold directly and correctly installed.*

Therefore:

parts manufactured and/or added to the Sematic product without having it checked by Sematic, or non-original parts based upon a Sematic design (even if supplied by authorised agents) cannot be considered under guarantee since the following conditions have not been ensured:

1. *Quality control of raw material supply*
2. *Process control*
3. *Product control*
4. *Conformity tests according to Sematic specifications*

Furthermore, Sematic

- *guarantees the performance life of its products only if correctly stored (indoors storage at temperatures ranging between 0°C and +60 °C out of direct sunlight) and correctly installed;*
- *guarantees the perfect performance of the products installed in environments with temperatures between 0°C and +60 °C and with a non-condensing, relative humidity level inbetween 20% and 80%. (Special note: for temperatures and humidity rates outside these ranges, please consult our Technical Dept.)*

The product is compliant with the following EU Directives:

- *98/37/CE Machinery Directive and subsequent modifications (when applicable)*
- *2014/33/EU Lifts Directive*
- *93/68/CEE Markings*
- *90/269/CEE Heavy loads handling*
- *Noise (Acoustic emission) 86/188/CEE modified according to Directive 98/24/CEE*
- *Electromagnetic compatibility 2014/30/EU*
- *Low Voltage Directive 2014/35/EU*

and with the following particular standards:

- *EN81-1/2;*
- *EN81-20/50;*
- *AS1735;*
- *EN12015/EN12016;*
- *GB7588 + XG1;*

The present document has been drafted in accordance with EN13015

Taking into account, during all project planning, the Risk Assessments relating to:

a. ***RISKS OF MECHANICAL HAZARDS***
- *Squeezing during operations*
- *Squeezing after Trapping caused by friction (glass panels)*
- *Cuts caused by sharp edges, or static sharp pieces*

b. ***RISKS OF ELECTRICAL HAZARDS***
- *Persons in contact with energized parts (direct contact)*
- *Persons in contact with parts that become energized due to a fault (indirect contact)*

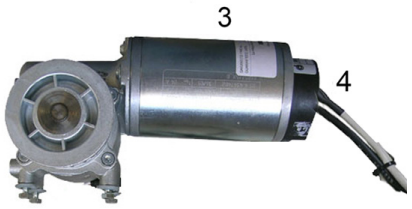
c. ***RISKS OF OVERHEATING***

d. ***RISKS GENERATED BY NOISE***

e. ***RISKS GENERATED BY VIBRATION***

f. ***RISKS GENERATED BY MATERIALS AND SUBSTANCES***

2 WHAT IS THE SZS©?



The System consists of:

- *a Car Door Operator (1)*
- *a microprocessor-based Door Controller (2)*
- *a DC Motor (3) with feedback signals (4)*

The "Sematic SZS©" controller automatically controls the opening and closing of the lift doors, monitoring the timing, current variations, speeds (high speed, low speed), various safety systems (reversing system, etc.) and faults (high voltage, signal failure, ...).

There are two independent speed curve profiles for the opening and closing cycles (see paragraph 2.1) which can be modified by means of the door controller trimmers placed on top of the internal case.

Warning: please note that SZS DC-PWM© door controller has a power limitation and is available only for reduced size doors.
If the door installation does not allow the correct operation of the doors, alternative high powered drives are available.
In this case please contact our sales department.

Note: the pictures on this document are examples only; real component appearances may differ according to supplied configuration of door operator and motor.

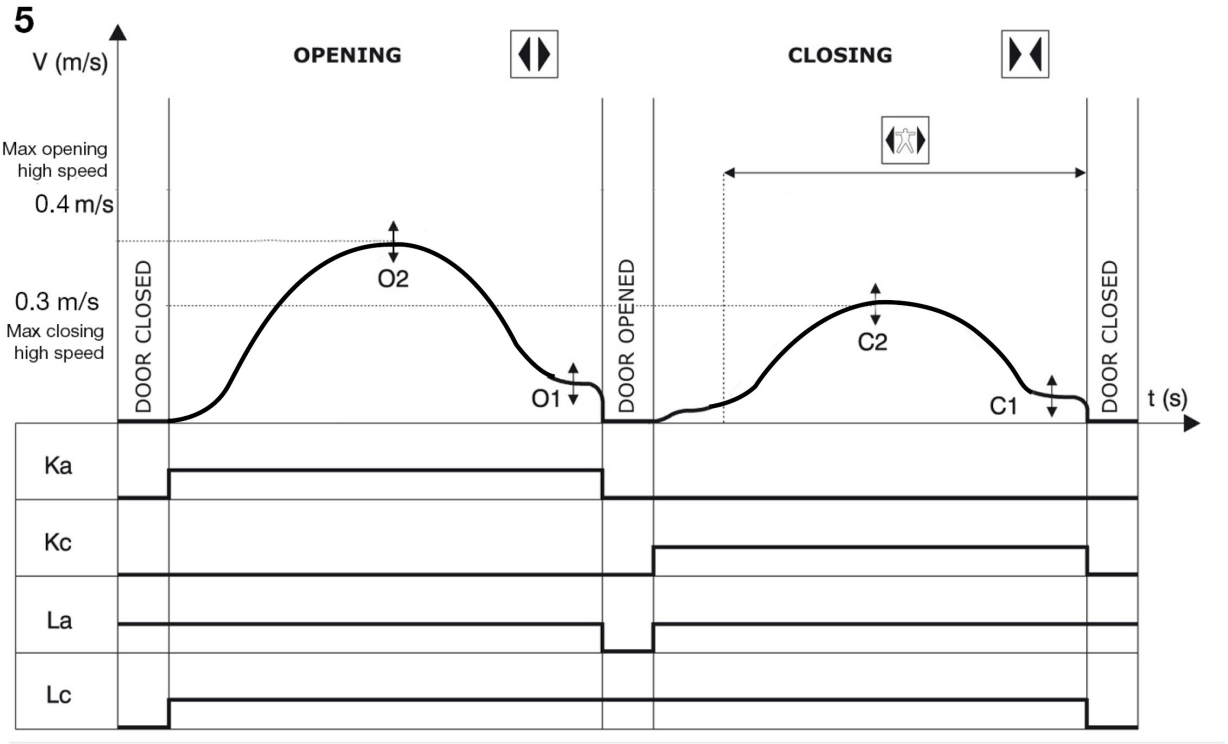
2.1 SPEED PROFILE

Opening cycle

O1	Opening final low speed
O2	Opening high speed

Closing cycle

C1	Closing final low speed
C2	Closing high speed



Key

Ka	Door opening
Kc	Door closing
La	Open Limit
Lc	Close limit
	Closing cycle
	Active reversing system
	Opening cycle

3 GENERAL FEATURES

3.1 TECHNICAL INFORMATION

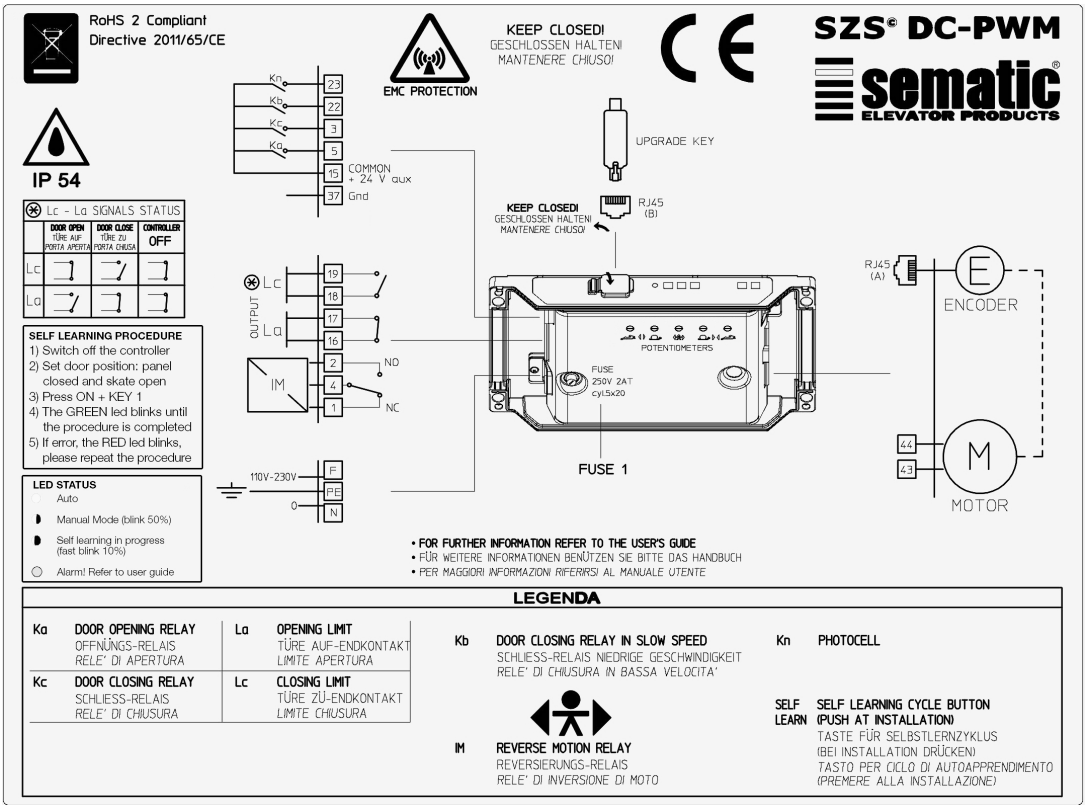
MAIN SUPPLY VOLTAGE	230 Vac - 90-270 Vrms, 50-60Hz
TYPICAL POWER CONSUMPTION	20-30 VA
PEAK POWER CONSUMPTION	50 VA
MOTOR OVERLOAD PROTECTION	@In <15 minutes @2In <3 minutes
OPERATIONAL TEMPERATURE RANGE	from 0°C to +60°C
HUMIDITY	non-condensing between 20% and 80%
PROTECTION	rapid cartridge fuse [5x20, 250V, 4 Amp]
PERFORMANCE SPEED	separately adjustable for opening and closing through a trimmer
REVERSAL SENSITIVITY	variable, only operational on door close cycle; adjustable through a trimmer
IP RATE	IP 54

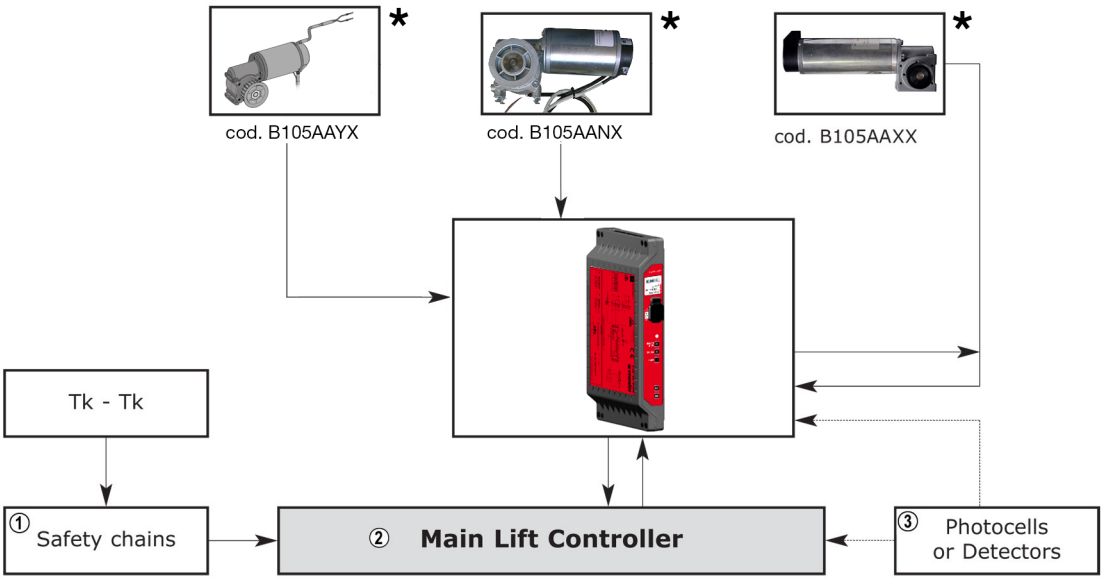
3.2 DOOR CONTROLLER SZS©

1. *RJ45 Connection port (Upgrade Key)*
2. *6 poles connector for in-coming controller signals and detector connections*
3. *7 poles connector for out-going controller signals*
4. *230 Vac power supply*
5. *2 poles connector for motor*
6. *RJ45 Connection port (Motor optical Encoder)*

4 SIGNALS TO/FROM THE DOOR CONTROLLER

4.1 CONNECTIONS





1	Safety chains
2	Main Lift Controller
3	Photocells or Detectors
*	With these motors the complete Sematic Drive System operator acquires the IP43 protection

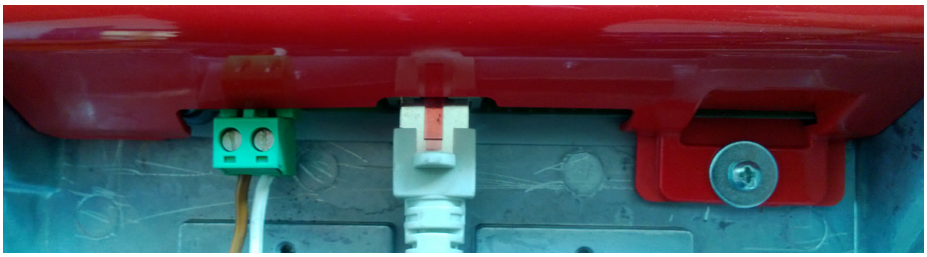
INCOMING SIGNALS FROM THE DOOR CONTROLLER			
Signal	Connector Pins	Contact type & normal state	Note
Opening control Ka (coming from the Main Lift Controller)	Connector pins 5-15	These connections require dry (voltage free) contacts (contact open when inactive)	When the Door Controller is installed on a Front & Rear entrance car, it is important that the opening and closing commands have no common contacts between the two doors. Shielded, Grounded Wire Highly Recommended
Closing control Kc (coming from the Main Lift Controller)	Connector pins 3-15	These connections require dry (voltage free) contacts (contact open when inactive)	
Forced closing control at low speed Kb	Connector pins 15-22	These connections require dry (voltage free) contacts (contact open when inactive)	The main lift controller may signal the forced closing when the photocell (or similar device) shall be made inoperative due to a failure, or after several door closing failures.
Re-opening control Kn	Connector pins 15-23	These connections require dry (voltage free) contacts (both logics available)	
Encoder signals	Connector RJ45 (A)	Factory prewired connector	

Note: The SZS© controller may also work with different input signals voltage from the Main Lift Controller range from 6 to 24 V CC, to use this features:

- *Connect terminal 37 to the external input signals power source 0V CC*
- *The pin37 is connected to the door controller chassis*

OUTGOING SIGNALS FROM THE DOOR CONTROLLER			
Signal	Connector Pins	Contact type & Normal state	Notes
Opening limit switch contact La	Connector pins 16-17	These connections provide dry (voltage free) contact.	The contact is open when the door is fully open. Contact rating: 3A 250Vac 30Vdc
Closing limit switch contact Lc	Connector pins 18-19	These connections provide dry (voltage free) contact.	The contact is open when the door is fully closed. Contact rating: 3A 250Vac 30Vdc
Reversing system signal IM	Connector pins 1-4	These connections provide dry (voltage free) contact. (contact normally closed)	This signal is generated by dry (voltage free) Form C contacts (relay within the Door Controller) and is activated only when either a mechanical obstacle (excessive force) prevents the doors from closing, or a signal is received from an external safety device which is connected to the door controller. It is used to signal to the main lift controller to interrupt the door close command and give a door open signal. Contact rating: 3A 250Vac 30Vdc
	Connector pins 2-4	(contact normally open)	
Motor	Connector pins 43-44	Factory-prewired connector	

- *For the mechanical installation door operator, refer to the manual "Installation and maintenance of Sematic doors".*
- *The door controller is supplied already mounted on the operator. All the connections between the door controller and the motor are pre-wired at Sematic.*



Note: *In case of motor replacement be sure to bind the excess cable lenght as above pictured, to avoid any contact of the motor cable with the driving belt.*

Warning:

- *to avoid possible induced currents within field wiring, it is recommended to shield the Ka and Kc signals (connector pins 3, 5 and 15) with grounded, shielded cables.*
- *changes made to the factory wiring cable length or door controller position can damage the EMC system characteristics and is not recommended.*

4.1.1 Detector/Photocell/Barriers: Signal-Only Connection to the Door Controller (Direct Connection)

This connection requires a dry (voltage free) external relay contact connected to the Door Controller Connector pins 15-23.
It is possible to connect the single output signal from a photocell (or similar device) formed by a voltage free contact, so that the door controller can directly receive the re-open command. The photocell (or similar device) has therefore an independent power supply and sends only its outgoing signal to the Sematic SZS© controller.
During the reopening of the door the controller sends a signal to the main lift controller through the IM relay contact (green led is lighted at on the door controller front).

5 SYSTEM WORKING INSTRUCTIONS

5.1 COMMISSIONING

The following steps have to be carried out in the stated order.
In particular the supply voltage must be connected in the last step.

- *Check that the MLC operating data matches the values on the door drive*
- *Mount the device*
- *Connect the SZS© controller to the output line, following the polarity indicated on the device*
- *Connect the supply line cord to the power supply*
- *When the SZS controller is switched ON firstly the red led flashes quickly and than the green led lights up; the device is ready for operation.*

Self learning procedure: execute the self learning procedure as described in **"7.1 Self-learning" a pag. 18**

5.2 BASIC LED SIGNAL INDICATIONS

The LEDs alongside the input and output plugs connectors indicate which control signal is currently active:

- *Door closing in progress (input pin 3)*
- *Door opening in progress (input pin 5)*
- *Door closing in low speed force closing (input pin 22)*
- *Activation of re-opening device photocell/detector (input 23)*
- *Door open (output relay 16 and 17)*
- *Door close (output relay 18 and 19)*
- *Activation of revers motion (output relay 2/4/1)*

5.3 AUTOMATIC MODE

When the supply is switched ON, the device is ready for use in automatic mode and the green led is ON

OPENING

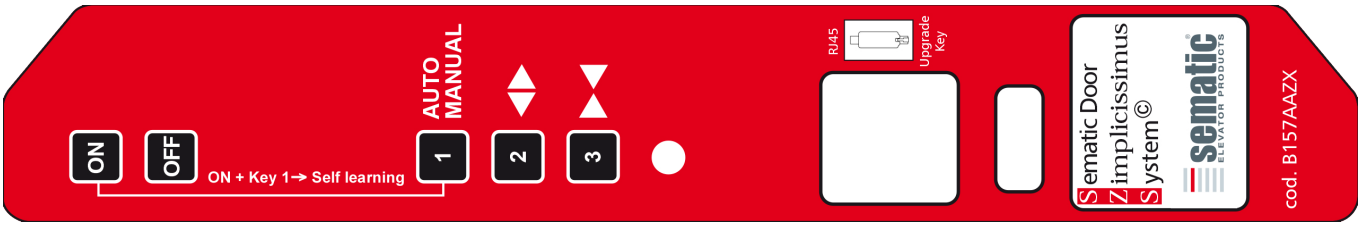
- *If an opening signal is given by the main lift controller ,the door controller starts to open the door according to the set speed as long as the command is present or until the door reaches the LA open limit (output contact LA open).*
- *The door reach the OPEN position with the Opening final low speed set*

CLOSING

- *If a closing command is given by the main lift control, the door controller starts to close the door according to the set speed as long as the command is present or until the door reaches the LC colse limit (Output contact LC open)*
- *In case of signal loss or failure of the main lift control the door controller immediately stops the door movement.*
- *The door reach the CLOSE panel position with the Closing final low speed set*
- *The close command takes priority over all other control commands*

5.4 MANUAL MODE

Note *(*): in manual mode the main lift controller signals are automatically excluded.*



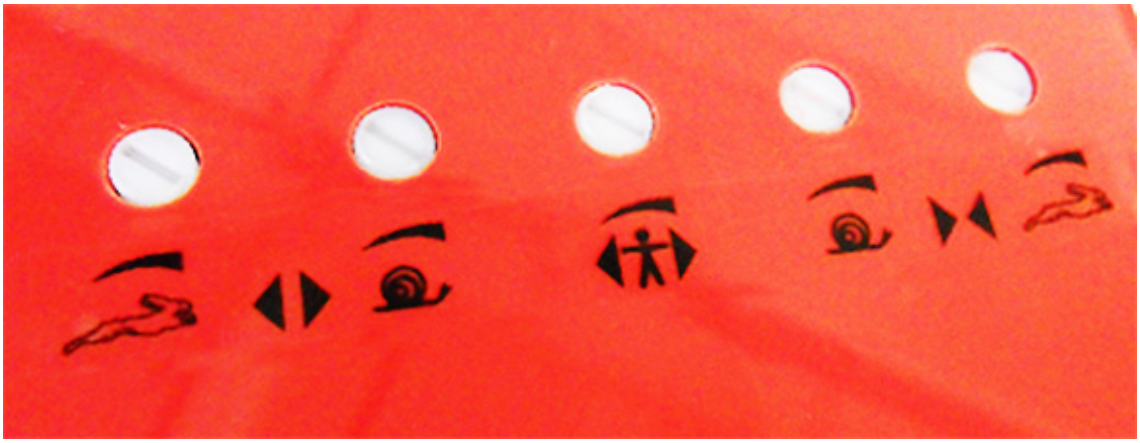
To test the correct door operator function before connecting the main lift controller signals, it's possible to open or close the door through the two buttons <> and >< located on the door drive front panel.

- *When the power supply is switched ON, the device is ready for use in automatic mode. The green led is ON*
- *Keep pressed the button 1 (AUTO/MANUAL) to enter in MANUAL mode. The led greed is ON and flashing (500ms ON and 500ms OFF)*
- *Release the button 1 (AUTO/MANUAL)*
- *Keep pressed the <> button to open the door. The command must remain continuously present in order to open the door*
- *Keep pressed the >< button to close the door. The command must remain continuously present in order to close the door*
- *Press again the button 1 (AUTO/MANUAL mode) in order to return in AUTO mode. The green led stops blinking*

6 MAIN FUNCTIONS

6.1 REVERSING SYSTEM FORCE

The reverse motion torque parameter sets the sensitivity degree to detect an obstacle during the door closure, thus activating the reopening command. The parameter's value can be manually set with a trimmer [IM] from a minimum force of 80N (high sensitivity) to a maximum force 140N (low sensitivity).
Please note that a minor re-opening sensitivity corresponds to higher force values and vice versa.



The reversing system is INTERNAL, the reopening of the doors due to obstacle detection is solely controlled by the Door Controller and door reopening signal is sent to the main lift controller through the IM contacts (1-4 contacts normally closed, 2-4 contacts normally open).

6.1.1 Reversing system force setting

The reverse motion torque parameter sets the sensitivity degree to detect an obstacle during the door closure, thus activating the reopening command. The parameter's value can be manually set through the [IM] trimmer (turning it clockwise will set the reversing system force from the minimum value to the maximum value)
Please note that a minor re-opening sensitivity corresponds to higher force values and vice versa.

6.2 FORCED CLOSING (NUDGING)

In the event of photocell failure, after several failed attempts of closure, it is possible to command the closure of the doors in low speed (forced closing) by closing the 15-22 connector pins using a relay (voltage free contact).
When the Kb signal is activated the door controller closes in low speed (fixed value).
During this phase the door doesn't reverse, when an obstruction is detected the torque is reduced in order not to exceed the closing force and kinetic energy limits (force given with IM trimmer adjustment).

6.3 EMERGENCY RELEASE AFTER POWER OFF

If the main power supply fails when the door is closed with Lc (close limit) active the SZS door drive operates automatically in the following ways:
- **Door Operator with Car Door Lock:** the door drive after a set pause time, fully open the skate in low speed in order to allow the unlocking of the car door lock
- **Door Operator without Car Door Lock**: the door drive partially open the skate in low speed in order to avoid the landing door release

Please, refer **"7.3 Car door lock" a pag. 19** *to verify the option "Car door lock"*

6.4 RESTART AFTER POWER OFF

After a supply voltage failure, the SZS has to reset the end position of the door travel (La or Lc limits). To do this, the door travels with reduced speed until the controller has detected the end position (La or Lc limits).
After this procedure the door return to work in standard speed.

6.5 PROTECTIVE DEVICE FAILURE/DEACTIVE, DOOR CLOSED WITH <4J

EN81-20 5.3.6.2.2.1 d)
Pre condition:Protective device (e.g Lightcurtain /photocell) directly connected to the SZS (KN input).
Post condition/requirements: In case of failure, or deactivation of the protective device (e.g light curtain/photocell), the kinetic energy of the doors shall be limited to 4J, if the lift is kept in operation at any time the door(s) is (are) closing.

In case the KN input is permanently active the SZS reacts according description below:
1) LA=ON (Door opened)

2) KN=ON (light curtain/photocell obstructed or fail)
3) KC =ON (closing command active)
4) After the expiration of a fixed time out (30s) the door close in low speed and kinetic energy <4J
5) If During the closing in low speed:
5a)KC=OFF and KA=ON the door stop the closing and reopen in normal speed
5b)KC=ON and KA=ON the door continues to close in low speed
5c)KC=OFF the door stops the closing

Function always active

6.6 OPENING FORCE LIMITER

EN81-20 5.3.6.2.2.1 h)
The glass doors, shall be provided with means to limit the opening force to 150N to stop the door in event of an obstruction

The opening force limiter is active:
a) for all the door configurations (not only for glass door)
b) during all panel opening excluded the first 2mm and the last 25mm (where LA can be activated)

If during the opening or re-openig the force limiter is exceeded and the panel/s still blocked for at least 0,5sec the SZS immediatelly stop the opening, automatically re-closed (back step of 20mm) the panel/s and then waits 1 sec before to react accordingly to the command provide by main lift control.

Function always active

6.7 MANUALLY DOOR OPEN BY <300N

EN81-20 5.3.15.1
Pre-condition:when the lift stops in the unlocking zone and the KC closing command is removed.
Post condition:shall be possible with a force not greater than 300N to open the car and landing door by hand from the landing and within the car.

The SZS reacts according description below:
1) LC=ON (door locked)
2) KC=OFF
3) After the expiration of a fixed time of 10 sec the system starts automatically to open up to skate space and the stop with LC=ON
4)The motor torque is limited and in case of manual open the LC is deactivated after 10..15 mm of panel opening

While the system still with open skate:
a) If KA=ON the door open
b) If KC= ON the skate closes in locked position

Function always active anyway can be activated or deactivated by user key pad combination.

Check that the SZS is switched off, after that the simultaneous pressure of button ON and 2 cause the transition ON/OFF or OFF/ON on the function

At any SZS power start-up the diagnostic green led will show if the function is not active in particular:
FUNCTION NOT ACTIVE:1 sec of fast flashing
FUNCTION ACTIVE: no flashing

6.8 ALARMS

The Sematic SZS© controller has the ability to diagnose a number of anomalous situations; such diagnostics are very helpful to the maintenance personnel to assist in locating possible operational problems. When any monitored error occurs, the Door Controller will signal it with the leds: the red led is on and flashes showing the error code (the flash number corresponds to the alarm code). Only in automatic mode,pushing the button 2 at least 3 seconds,the SZS controller shows,by the mean of the diagnostic led,the last alarm recordered.
The following table shows the type of signalling and the relevant alarm detected by the Door Controller:

Error/ Alarm	Error/Alarm description	Led Color	Flashing visualized	Flashing time ON	Flashing time OFF	Flashing pause OFF (after alarm signal)	Action taken by door drive
Self learn error	Error during the self learning procedure	Red	Yes	100ms	100ms	No	Stop the self learning procedure
Alarm motor overheating	Motor over-current due to the door mechanical strain (*)	Red	Yes 1 flash+Pause	100ms	500ms	2 sec	Stop the door movement. Auto reset when the proper conditions are restored
Alarm motor power inverted	Motor cable connection reversed (**)	Red	Yes 2 flash+Pause	100ms	500ms	2 sec	Stop the door movement auto reset after 3 consecutive visualization of the alarm
Alarm motor encoder jerk	Motor encoder cable interruption	Red	Yes 3 flash+Pause	100ms	500ms	2sec	
Alarm motor power jerk	Motor cable interruption	Red	Yes 4 flash+Pause	100ms	500ms	2sec	
Over voltage	Internal bus overvoltage	Red	Yes 5 flash+Pause	100ms	500ms	2sec	Stop the door movement. Auto reset when the proper conditions are restored
Internal alarm	Generic alarm due to an internal malfunction of the door controller	Red	No	5sec	No	No	
Power stage alarm	Power supply switch damaged (***)	Red	Yes alternating with the green led in its normal behavior	500ms, every 5s	No	No	Reduction of the opening and closing door performance, if needed

Notes:

- *(*)This alarm indicates an excessive strain on the operator's functioning; it is advisable to check that the system has minimum friction, especially during the opening phase.*
- *(**) If the motor connections are reversed, the door open when a closing signal is received and close with an opening signal. The door operator is pre-wired and tested by the manufacturer.* ***IMPORTANT: Special attention must be taken when replacing motor and/or cables***.
- *(***) This alarm indicates a failure on the door controller power stage. If the failure is limited to a single power channel the door controller is able to run with a reduced performance. In this case the door controller automatically reduce the open and close speed in order to allow the operation of the elevator. It is necessary to replace the door controller in order get the elevator back to work with standard performances.*

7 TRIAL OPERATIONS BEFORE SETTING AT WORK

To avoid damage, check that the power supply voltage is within the rated value before connecting.

1. *Open the door controller housing cover*
2. *Connect the motor cables (pin 43-44 and encoder)*
3. *Connect the 230V power supply to the L1/PE/N plug*

7.1 SELF-LEARNING

The self learning cycle allows the door controller to:

- *Detect the motor type*
- *Detect the direction of the door movement*
- *Detect the skate type*
- *Store the running distance between the closing and opening limit.*

7.1.1 SELF-LEARNIG CYCLE PROCEDURE

- *Switch off the SZS© (Push key OFF)*
- *Manually push the panels into the CLOSED position (while keeping OPEN the skate arms)*
- *Pressing simultaneously the buttons ON and 1, the green led starts to blink*
- *The learn run starts automatically, and the buttons ON and 1 can be released. During the learn trip the door automatically open the panel with a predefined ramp for a space less than 100mm and stop.*
- *The door closes in low speed up to reach the fully close position (skate closed)*
- *The door open in low speed up to reach the fully open position*
- *At the end of the opening cycle, the self-learning cycle is complete and the led green stops blinking*
- *The door can now operate in normal speed, in two different ways: with a command from the main lift control (**AUTO mode**) or by pressing the buttons >< or <> (**MAN mode**)*

Self-learning error

In case the self-learning procedure hasn't been completed successfully the red led starts blinking very fast (100ms ON and 100ms OFF).
The self learning error can be caused by:
- wrong motor cable connection
- wrong initial door panel position

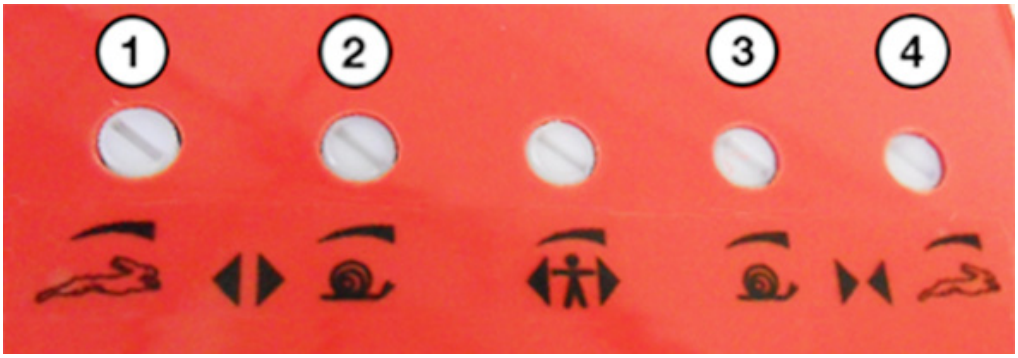
In these cases it is necessary to repeat the self-learning procedure

IMPORTANT NOTE:

- *The self learning can only be activated manually and must be carried out under direct supervision of maintenance personnel (i.e. the door controller must store the correct data; if "self learning" procedure is completed correctly, the green Led light stop to blink)*
- *During the self learning cycle please check carefully that the panels slides freely and that the door operator completes its expected travel. The self learning cycle is essential if a replacement door controller has been carried out.*
- *Every time the system is re-powered and an opening/closing command signal is given (for instance after a power supply unterruption) it performs a reset cycle, i.e. the door controller searches for a closing limit at low speed. **(This is NOT a self learning cycle).***

7.2 SPEED PROFILE TRIMMERS

To set up both opening and closing speed profiles there are four trimmer on the top board internal case as shown in the following picture:



- *Trimmer N.1 sets the high opening speed (turning it clockwise will set the high opening speed from the minimum speed value (0,1 m/s) to the maximum speed value (0,4 m/s))*
- *Trimmer N.2 sets the low final opening speed (turning it clockwise will set the low opening speed from the minimum speed value (0,02 m/s) to the maximum speed value(0,15 m/s))*
- *Trimmer N.3 sets the low final closing speed (turning it clockwise will set the low closing speed from the minimum speed value (0,02 m/s) to the maximum speed value (0,1 m/s))*
- *Trimmer N.4 sets the high closing speed (turning it clockwise will set the high closing speed from the minimum speed value (0,1 m/s) to the maximum speed value (0,3 m/s))*

Note: *the trimmer set value is saved in a permanent memory only if the trimmer stays inactive for a minimum of 2 seconds.*

7.3 CAR DOOR LOCK

To set up the car door lock setting is necessary to follow these steps:

1. *Check that SZS is switched off (green led not active)*

2. *Press key ON for few seconds*

3. *Verify that the green led is swiched ON.*
4. *If 1 flash = function not active (car door lock not used)*
5. *If 2 flash = function active (car door lock used)*

After this step, pushing the key ON, the green led will always perform the "Car door lock" procedure

To change the "Car door lock" option from *function not active* to *function active* and viceversa is necessary to follow these steps:

1. *Check that SZS is switched off (green led not active)*

2. *Keep push key 3 (><)*

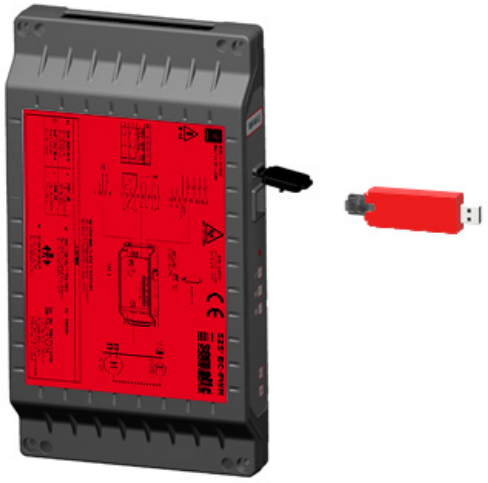
3. *Keeping push key 3 (><), push also the key ON; after that release both keys.*

4. *Visually test that the green led is switched ON, as shown at step 3*

8 SOFTWARE UPGRADE

8.1 SOFTWARE UPGRADE

To update the controller with the latest firmware please refer to the special instruction (301-112-000)



9 SPARE PARTS

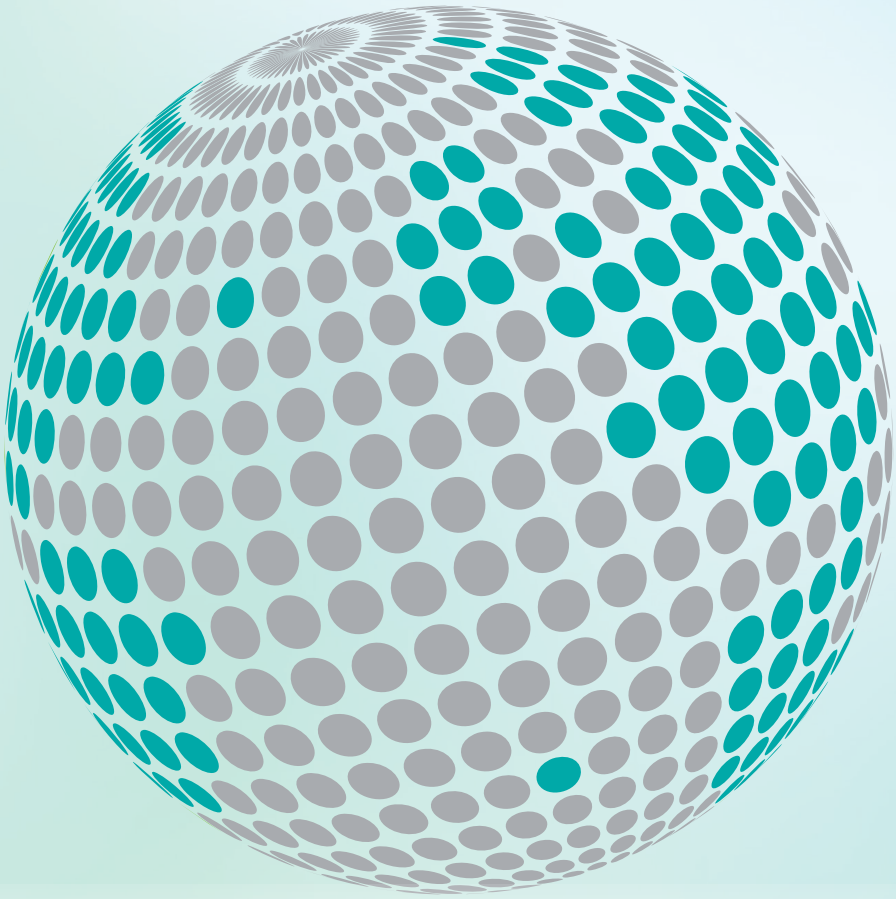
It is possible to order all the SZS© spare parts using the spare parts catalogue, by specifying the required quantity and the code of the ordered piece.

The codes indicated in the spare parts manual are extremely important to avoid misunderstandings and to ensure a rapid supply of the correct part. The spare parts catalogue, with photographs and details makes the Sematic doors spare parts purchase easy and quick.

OUR COMPONENTS ARE INTENDED FOR ELEVATOR USE ONLY

WITTUR

YOUR GLOBAL PARTNER FOR COMPONENTS, MODULES AND SYSTEMS IN THE ELEVATOR INDUSTRY



safety in motion™

More information about Wittur Group available on-line.

www.wittur.com

SELCOM® a WITTUR brand

Liftmaterial a WITTUR brand

sematic® a WITTUR brand